

## A Synopsis of Native Hawaiian Araliaceae<sup>1</sup>

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**ABSTRACT:** The four genera of Araliaceae native to Hawaii, *Cheirodendron*, *Munroidendron*, *Reynoldsia*, and *Tetraplasandra*, comprise 13 species and 2 subspecies, significantly fewer than have been recognized in previous treatments. Three new combinations are made: *C. forbesii* (Sherff) Lowry, *C. platyphyllum* ssp. *kauaiense* (Krajina) Lowry, and *C. trigynum* ssp. *helleri* (Sherff) Lowry. Keys are provided to the genera, species, and subspecies, and a complete synonymy is given for each taxon.

THIS SYNOPSIS is being published as a preliminary note to a more detailed treatment of Araliaceae that will appear in the forthcoming *Manual of the Flowering Plants of Hawai'i* (Wagner et al., in press). The four native genera of Hawaiian Araliaceae, *Cheirodendron*, *Munroidendron*, *Reynoldsia*, and *Tetraplasandra*, have received little attention since Sherff (1951, 1952a, 1952b, 1952c, 1952d, 1953, 1954, 1955, 1956, 1962) published an extensive series of notes and monographs. Sherff applied extremely narrow concepts of species and infraspecific taxa, so that variable populations were split far more than would be consistent with contemporary taxonomic practice. In all, he recognized 35 species, 116 varieties, and 5 forms, many of which were described as new. Sherff did not have the opportunity to visit Hawaii, however, and so lacked firsthand knowledge of the variation on which his classification was based.

My recent investigations, based on field observations and detailed study of herbarium specimens, have led me to the conclusion that native Hawaiian Araliaceae can best be treated as comprising 13 species and 2 subspecies, necessitating the three new combinations made here. Most of these taxa are well delimited morphologically, and often geographically, and present no special problems. Only *Tetra-*

*plasandra oahuensis*, and to a lesser degree *Cheirodendron trigynum* ssp. *trigynum*, appear to constitute somewhat polymorphic assemblages that are in need of detailed, field-based study to determine whether certain populations might warrant recognition at an infraspecific level.

Detailed descriptions of the taxa recognized here will be provided in the forthcoming manual, along with extensive discussions of the genera and species. The two naturalized species of Araliaceae in Hawaii, *Hedera helix* L. and *Schefflera actiophylla* (Endl.) Harms, will also be treated in the manual. A complete listing of type specimens for all names applied to Hawaiian Araliaceae will be published in the *Nomenclatural Index of Hawaiian Flowering Plants* (Wagner and Mill, in press).

It is interesting to note that many species of *Cheirodendron*, *Reynoldsia* and *Tetraplasandra* are key host plants for mating and larval development for a large number of Hawaiian Drosophilidae, including many species of *Drosophila* (Heed 1971; Montgomery 1975). Furthermore, all four genera of native Hawaiian Araliaceae serve as food plants for members of the endemic insect genus *Nesiomiris* (Heteroptera: Mitidae) and appear to have played a critical role in the evolution and speciation of this group (Gagné 1982).

### KEY TO THE GENERA

1. Leaves palmately compound or trifoliate. . . . . 1. *Cheirodendron*  
1. Leaves pinnately compound.

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2. Leaflets membranous, margins lobed or toothed and often undulate; petals and stamens 8–12; plants glabrous throughout or sparsely pubescent on the inflorescence and branch tips. . . . . 3. *Reynoldsia*
2. Leaflets coriaceous, margins entire; petals and stamens variable in number; plants often pubescent, occasionally glabrous.
3. Inflorescence long, pendant, racemose, the flowers solitary; carpels 12–15; leaflets densely pubescent with furfuraceous stellate hairs . . . . . 2. *Munroidendron*
3. Inflorescence compound-umbellate or racemose-umbellate, the flowers in umbellules; carpels 2–12 (–16); leaflets glabrous or pubescent with scurfy stellate hairs . . . . . 4. *Tetraplasandra*

## CHEIRODENDRON

*Cheirodendron* Nutt. ex Seem., J. Bot. 5:236. 1867.

## KEY TO THE SPECIES

1. Styles and carpels 2–4 (–5); leaflet margins usually toothed, occasionally subentire.
  2. Leaflets as wide or wider than long, broadly to depressed ovate, the margins caudate-dentate, almost spiny, the teeth more than 1 mm long, pointing out, with an upcurved tip.
  3. Styles and carpels (2–) 3–4 (–5); leaflets very broadly ovate to depressed ovate, wider than long, the base truncate or nearly so; 1525–1550 m on Mt. Waialeale, Kauai . . . . . 1. *C. dominii*
  3. Styles and carpels 2 (very rarely 3); leaflets broadly ovate, about as wide as long, the base obtuse to nearly truncate; 650–1250 m on Kauai . . . . . 2. *C. fauriei*
  2. Leaflets generally longer than wide, elliptic to broadly ovate, the margins entire or serrate-crenate, the teeth less than 1 mm long, strongly curved up and in toward the margin. . . . . 5. *C. trigynum*
  4. Styles and carpels (2–) 3–4 (–5); Niihau, Oahu, Molokai, Lanai, Maui, and Hawaii . . . . . 5a. ssp. *trigynum*
  4. Styles and carpels 2 (occasionally 3 in a few flowers); Kauai. . . . . 5b. ssp. *helleri*
  1. Styles and carpels 5 (rarely 4 in some flowers); leaflet margins entire or remotely serrulate.
  5. Leaflets elliptic to obovate, more than twice as long as wide, veins of the upper surface sunken in dried specimens; Kauai . . . . . 3. *C. forbesii*
  5. Leaflets broadly ovate to depressed ovate, as wide or wider than long, veins of the upper surface raised in dried specimens . . . . . 4. *C. platyphyllum*
  6. Apex of the leaflets acuminate-mucronate; fruit 5.3–7.5 mm long; Oahu . . . . . 4a. ssp. *platyphyllum*
  6. Apex of the leaflets rounded to acuminate, rarely mucronate; fruit 3.5–5 mm long; Kauai . . . . . 4b. ssp. *kauaiense*
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1. *C. dominii* Krajina, Preslia 10:94. 1931.
  2. *C. fauriei* Hochr., Candollea 2:487. 1925.  
Syn.: *C. fauriei* Hochr. var. *macdanielsii* Sherff, Bot. Leafl. 5:13. 1951.  
*C. trigynum* (Gaud.) A. Heller var. *kauaiense* H. Lév., Repert. Spec. Nov. Regni Veg. 10:154. 1911.  
*C. wahiawense* Krajina, Preslia 10:98. 1931.  
*C. wahiawense* Krajina var. *populneum* Krajina, Preslia 10:98. 1931.
  3. *C. forbesii* (Sherff) Lowry, **comb. nov.**  
Basionym: *C. kauaiense* Krajina var. *forbesii* Sherff, Bot. Leafl. 5:12. 1951.  
Syn.: *C. kauaiense* Krajina var. *keakuense* Krajina, Preslia 10:98. 1931.
  4. *C. platyphyllum* (Hook. & Arnott) Seem., J. Bot. 5:236. 1867.  
4a. ssp. *platyphyllum*.  
Syn.: *Panax* ? *platyphyllum* Hook. & Arnott, Bot. Capt. Beechey's Voy., 84. 1832; *Hedera* pla-

- typhylla* (Hook. & Arnott) A. Gray, U.S. Expl. Exped., Phan., 720. 1854.
- 4b. ssp. *kauaiense* (Krajina) Lowry, **comb. nov.**  
 Basionym: *C. kauaiense* Krajina, Preslia 10:96. 1931.
5. *C. trigynum* (Gaud.) A. Heller, Minnesota Bot. Studies 1:870. 1897.
- 5a. ssp. *trigynum*  
 Syn.: *Aralia trigyna* Gaud., Bot. Freycin. Voy., tab. 98. 1826 [text, p. 474. (Jan–Mar) 1830].  
*Panax* ? *gaudichaudii* DC., Prodr. 4:253. (Sep) 1830;  
*Hedera gaudichaudii* (DC.) A. Gray, U.S. Expl. Exped., Phan., 71. 1854; *C. gaudichaudii* (DC.) Seem., J. Bot. 5:236. 1867.  
*Panax* ? *ovatum* Hook. & Arnott, Bot. Capt. Beechey's Voy., 84. 1832.  
*C. trigynum* (Gaud.) A. Heller var. *acuminatum* Skotts., Meddel. Göteborg. Bot. Trädg. 15:417. 1944.  
*C. trigynum* (Gaud.) A. Heller var. *confertifolium* Sherff, Bot. Leaflet. 5:2. 1951.  
*C. trigynum* (Gaud.) A. Heller var. *degeneri* Sherff, Bot. Leaflet. 5:4. 1951.  
*C. trigynum* (Gaud.) A. Heller var. *degeneri* Sherff f. *pauciflorum* Sherff, Bot. Leaflet. 5:5. 1951.  
*C. trigynum* (Gaud.) A. Heller var. *fosbergii* Sherff, Bot. Leaflet. 5:7. 1951.  
*C. trigynum* (Gaud.) A. Heller var. *halawanum* Sherff, Bot. Leaflet. 5:3. 1951.  
*C. trigynum* (Gaud.) A. Heller var. *hawaiiense* H. Lév., Repert. Spec. Nov. Regni Veg. 10:154. 1911.  
*C. trigynum* (Gaud.) A. Heller var. *hillebrandii* Sherff, Bot. Leaflet. 5:5. 1951.  
*C. trigynum* (Gaud.) A. Heller var. *ilicoides* Sherff, Bot. Leaflet. 5:10. 1951.  
*C. trigynum* (Gaud.) A. Heller var. *mauiense* H. Lév., Repert. Spec. Nov. Regni Veg. 154. 1911.  
*C. trigynum* (Gaud.) A. Heller var. *mauiense* H. Lév. f. *parvulum* O. Degener, I. Degener & Sherff, Occas. Papers Bishop Mus. 22(12):212. 1962.  
*C. trigynum* (Gaud.) A. Heller var. *molokaiense* Sherff, Bot. Leaflet. 5:10. 1951.  
*C. trigynum* (Gaud.) A. Heller var. *molokaiense* Sherff f. *angustius* Sherff, Bot. Leaflet. 5:11. 1951.  
*C. trigynum* (Gaud.) A. Heller var. *oblongum* Sherff, Bot. Leaflet. 5:9. 1951.  
*C. trigynum* (Gaud.) A. Heller var. *oblongum* Sherff f. *latius* Sherff, Bot. Leaflet. 5:10. 1951.  
*C. trigynum* (Gaud.) A. Heller var. *osteostigma* Sherff, Bot. Leaflet. 5:12. 1951.  
*C. trigynum* (Gaud.) A. Heller var. *rockii* Sherff, Bot. Leaflet. 5:8. 1951.  
*C. trigynum* (Gaud.) A. Heller var. *skottsbergii* Sherff, Bot. Leaflet. 5:7. 1951.  
*C. trigynum* (Gaud.) A. Heller var. *subcordatum* Sherff, Bot. Leaflet. 5:9. 1951.
- 5b. ssp. *helleri* (Sherff) Lowry, **comb. nov.**  
 Basionym: *C. helleri* Sherff, Bot. Leaflet. 5:13. 1951.  
 Syn.: *C. trigynum* (Gaud.) A. Heller var. *multiflorum* Skotts., Meddel. Göteborg. Bot. Trädj. 15:416. 1944; *C. helleri* Sherff var. *multiflorum* (Skotts.) Sherff, Fieldiana, Bot. 29:40. 1954.  
*C. helleri* Sherff var. *microcarpum* Sherff, Bot. Leaflet. 5:14. 1951.  
*C. helleri* Sherff var. *sodium* Sherff, Bot. Leaflet. 6:6. 1952.

NOTE: *Cheirodendron* is a subendemic genus with a single additional species, *C. marquesense* F. Brown, occurring in the Marquesas Islands. The combination of opposite, palmately compound leaves and a jointed pedicel makes *Cheirodendron* very distinctive within Araliaceae.

AUTHOR'S NOTE: A new combination for *C. marquesense* F. Brown will be published by David Frodin.

#### MUNROIDENDRON

*Munroidendron* Sherff, Bot. Leaflet. 7:21. 1952.

1. *M. racemosum* (C. N. Forbes) Sherff, Bot. Leaflet. 7:22. 1952.

Syn.: *Tetraplasandra racemosa* C. N. Forbes, Occas. Papers Bishop Mus. 6(4):51. 1917.

*M. racemosum* (C. N. Forbes) Sherff var. *forbesii* Sherff, Bot. Leaflet. 7:23. 1952.

*M. racemosum* (C. N. Forbes) Sherff var. *macdanielsii* Sherff, Bot. Leaflet. 7:24. 1952.

NOTE: *Munroidendron* is strictly endemic to the island of Kauai and is now very rare. It is closely related to and probably derived from either *Tetraplasandra* or *Reynoldsia*, but it is easily distinguished by its remarkable inflorescence and corolla. These three genera, along with *Gastonia* (some ten species from East Africa, Madagascar, the Seychelles and Mascarenes, Malesia, and the Solomon Islands) form a closely related complex recently discussed by Philipson (1970).

#### REYNOLDSIA

*Reynoldsia* A. Gray, U.S. Expl. Exped., Phan., 723. 1854.

1. *R. sandwicensis* A. Gray, U.S. Expl. Exped., Phan., 724. 1854.

Syn.: *R. degeneri* Sherff, Bot. Leaflet. 6:15. 1952.

*R. hillebrandii* Sherff, Bot. Leaflet. 6:11. 1952.

*R. hosakana* Sherff, Bot. Leaflet. 6:18. 1952.

*R. huehuensis* Sherff, Bot. Leaflet. 6:12. 1952.

*R. huehuensis* Sherff var. *brevipes* Sherff, Bot. Leaflet. 6:13. 1952.

*R. huehuensis* Sherff var. *intermedia* Sherff, Bot. Leaflet. 6:13. 1952.

*R. muiensis* Sherff, Bot. Leaflet. 6:16. 1952.

*R. muiensis* Sherff var. *macrocarpa* O. Degener & Sherff, in Sherff, Bot. Leaflet. 7:17. 1952.

*R. oblonga* Sherff, Bot. Leaflet. 6:17. 1952.

*R. sandwicensis* A. Gray var. *intercedens* Sherff, Bot. Leaflet. 6:10. 1952.

*R. sandwicensis* A. Gray var. *molo-kaiensis* Sherff, Bot. Leaflet. 6:11. 1952.

*R. venusta* Sherff, Bot. Leaflet. 6:13. 1952.

*R. venusta* Sherff var. *lanaiensis* Sherff, Bot. Leaflet. 6:14. 1952.

NOTE: A genus of seven species with two each in Samoa, the Marquesas Islands, and the Society Islands, in addition to *Reynoldsia sandwicensis*, which occurs on the islands of Oahu, Molokai, Lanai, Maui, and Hawaii. Sherff (1952a) based his 12 new taxa mainly on characters of leaflet shape, inflorescence size, and pedicel length, which are now known to vary widely within individual populations.

#### TETRAPLASANDRA

*Tetraplasandra* A. Gray, U.S. Expl. Exped., Phan., 727. 1854.

#### KEY TO THE SPECIES

1. Inflorescence racemose-umbellate, the rays with lateral as well as terminal branches; inflorescence and lower surfaces of the leaflets often densely scurfy pubescent.

2. Stigmas and carpels 7–13; stamens (2–) 3–4 times as many as the petals; fruit globose, strongly ribbed when dry, the disk flattened to low conical, with only the center raised into a narrow, conical stylopodium, the ovary thus appearing nearly completely inferior; Molokai, Lanai, Maui, and Hawaii. . . . . 2. *T. hawaiiensis*
  2. Stigmas and carpels 2–5 (–7); stamens as many as the petals (rarely 2–3 times as many in *T. oahuensis*); fruit ovoid to cylindrical, without ribs when dry (occasionally ribbed in *T. oahuensis*), the disk expanded, conical to ovoid, the ovary thus appearing ( $\frac{1}{4}$ )  $\frac{1}{3}$  inferior to completely superior.
  3. Ovary disk strongly expanded and hypanthium poorly developed below the ring (i.e., the level of attachment of the petals and stamens), the ovary thus appearing fully superior, even in bud and flower; Koolau Mts., Oahu. . . . . 1. *T. gymnocarpa*
  3. Ovary disk partially expanded but the hypanthium well developed below the ring, the ovary thus appearing at least  $\frac{1}{4}$  inferior.
  4. Ultimate units of the inflorescence racemose; inflorescence and lower surfaces of the leaflets densely scurfy stellate pubescent; Kauai, Oahu (Waianae Mts.), Molokai, Lanai, Maui, and Hawaii . . . . . 3. *T. kavaensis*
  4. Ultimate units of the inflorescence umbellate; inflorescence and leaflets glabrous throughout; Kauai, Oahu, Molokai, Lanai, Maui, and Hawaii . . . 4. *T. oahuensis*
  1. Inflorescence strictly compound-umbellate, the rays without lateral branches (but often with bracts or bract scars); inflorescence and lower surfaces of the leaflets glabrous.
  5. Rays of the inflorescence with one to several bracts or bract scars; stamens 5–20 (–25); fruit ca. 5–12 (–15) mm high when mature; Kauai, Oahu, Molokai, Lanai, Maui, and Hawaii. . . . . 4. *T. oahuensis*
  5. Rays of the inflorescence without bracts or bract scars (or very rarely with one scar in *T. waimeae*); stamens 25–50; fruit 20–25 mm high when mature.
  6. Inflorescence 2–3 times compound-umbellate; stamens 25–30 (–40); carpels 4–7 (–8); fruit ovoid-cylindrical; Kauai . . . . . 5. *T. waialealae*
  6. Inflorescence once compound-umbellate; stamens 45–60; carpels (7–) 8–12; fruit globose-urceolate; Kauai. . . . . 6. *T. waimeae*
1. *T. gymnocarpa* (Hillebr.) Sherff, Bot. Leafl. 7:12. 1952.  
Syn.: *Pterotropia gymnocarpa* Hillebr., Fl. Hawaiian Isl., 150. 1888; *Heptapleurum gymnocarpum* (Hillebr.) Drake, Ill. Fl. Ins. Mar. Pacif., 183. 1890; *Dipanax gymnocarpa* (Hillebr.) A. Heller, Minnesota Bot. Stud. 1:870. 1897.  
*Pterotropia gymnocarpa* Hillebr. var. *pupukeensis* Degener, Fl. Hawaiiensis, fam. 281. 1938; *T. gymnocarpa* (Hillebr.) Sherff var. *pupukeensis* (Degener) Sherff, Bot. Leafl. 8:12. 1953.  
*T. gymnocarpa* (Hillebr.) Sherff var. *leptocarpa* Sherff, Bot. Leafl. 7:15. 1952.  
*T. gymnocarpa* (Hillebr.) Sherff var. *megalocarpa* Sherff, Bot. Leafl. 7:15. 1952.
  2. *T. hawaiiensis* A. Gray, U.S. Expl. Exped., Phan., 728. 1854.  
Syn.: *T. hawaiiensis* A. Gray var. *awiniensis* Sherff, Bot. Leafl. 6:37. 1952.  
*T. hawaiiensis* A. Gray var. *gracilis* Sherff, Bot. Leafl. 6:38. 1952.  
*T. hawaiiensis* A. Gray var. *microcarpa* Sherff, Bot. Leafl. 6:38. 1952.
  3. *T. kavaensis* (H. Mann) Sherff, Bot. Leafl. 7:10. 1952.  
Syn.: *Heptapleurum kavaense* H. Mann, Proc. Amer. Acad. Arts 7:168. 1867; *Agalma kavaense* (H. Mann) Seem., J. Bot. 6:103. 1868; *Pterotropia kavaensis* (H. Mann) Hillebr., Fl. Hawaiian Isl., 150. 1888; *Dipanax kavaensis* (H. Mann) A. Heller, Minnesota Bot. Stud. 1:871. 1897.

- Dipanax mannii* Seem., J. Bot. 6: 130. 1868.
- Heptapleurum dipyrenum* H. Mann, Proc. Amer. Acad. Arts 7: 168. 1867; *Pterotropia dipyrena* (H. Mann) Hillebr., Fl. Hawaiian Isl., 150. 1888; *Dipanax dipyrenum* (H. Mann) A. Heller, Minnesota Bot. Stud. 1: 870. 1897; *T. kavaiensis* (H. Mann) Sherff var. *dipyrena* (H. Mann) Sherff, Bot. Leaflet. 7: 11. 1952.
- Pterotropia kaalae* Skotts., Acta Horti Göteborg. 10: 151. 1936, non *T. kaalae* (Hillebr.) Harms.
- T. kavaiensis* (H. Mann) Sherff var. *grandis* Sherff, Bot. Leaflet. 7: 14. 1952.
- T. kavaiensis* (H. Mann) Sherff var. *intercedens* Sherff, Bot. Leaflet. 7: 13. 1952.
- T. kavaiensis* (H. Mann) Sherff var. *koloana* Sherff, Bot. Leaflet. 7: 12. 1952.
- T. kavaiensis* (H. Mann) Sherff var. *nahikuensis* Sherff, Bot. Leaflet. 7: 13. 1952.
- T. kavaiensis* (H. Mann) Sherff var. *occidua* O. Degener & Sherff, in Sherff, Bot. Leaflet. 8: 7. 1953.
- T. kavaiensis* (H. Mann) Sherff var. *robustior* Sherff, Bot. Leaflet. 7: 12. 1952.
- T. micrantha* Sherff, Bot. Leaflet. 7: 11. 1952.
- T. turbans* Sherff, Bot. Leaflet. 7: 16. 1952.
4. *T. oahuensis* (A. Gray) Harms, in Engl. & Prantl, Nat. Pflanzenfam. III, 8: 30. 1894.
- Syn.: *Gastonia* ? *oahuensis* A. Gray, U.S. Expl. Exped., Phan., 726. 1854; *Triplasandra oahuensis* (A. Gray) Seem., J. Bot. 6: 139. 1868.
- Heptapleurum* (?) *waimeae* Wawra, Flora 56: 159. 1873, non *Tetraplasandra waimeae* Wawra.
- T. bisattenuata* Sherff, Bot. Leaflet. 6: 26. 1952.
- T. kaalae* (Hillebr.) Harms, in Engl. & Prantl, Nat. Pflanzenfam. III, 8: 30. 1894; *Triplasandra kaalae* Hillebr., Fl. Hawaiian Isl., 154. 1888.
- T. kaalae* (Hillebr.) Harms var. *multi-plex* Sherff, Bot. Leaflet. 8: 11. 1953.
- T. kahanana* O. Degener & Sherff, in Sherff, Bot. Leaflet. 8: 6. 1953.
- T. kohalae* Skotts., Acta Horti Göteborg. 15: 414. 1944.
- T. lanaiensis* Rock, Coll. Hawaii Publ. Bull. 1: 12. 1911.
- T. lihuensis* Rock var. *gracilipes* Sherff, Bot. Leaflet. 8: 9. 1953.
- T. lydgatei* (Hillebr.) Harms, in Engl. & Prantl, Nat. Pflanzenfam. III, 8: 30. 1894; *Triplasandra lydgatei* Hillebr., Fl. Hawaiian Isl., 153. 1888.
- T. lydgatei* (Hillebr.) Harms var. *brachypoda* Sherff, Bot. Leaflet. 6: 19. 1952.
- T. lydgatei* (Hillebr.) Harms var. *coreacea* Sherff, Bot. Leaflet. 6: 21. 1952.
- T. lydgatei* (Hillebr.) Harms var. *forbesii* Sherff, Bot. Leaflet. 6: 20. 1952.
- T. lydgatei* (Hillebr.) Harms var. *leptorachis* O. Degener & Sherff, in Sherff, Bot. Leaflet. 6: 20. 1952.
- T. meiandra* (Hillebr.) Harms, in Engl. & Prantl, Nat. Pflanzenfam. III, 8: 30. 1894; *Triplasandra meiandra* Hillebr., Fl. Hawaiian Isl., 152. 1888.
- T. meiandra* (Hillebr.) Harms var. *bisobtusata* Sherff, Bot. Leaflet. 6: 36. 1952.
- T. meiandra* (Hillebr.) Harms var. *bryanii* Sherff, Bot. Leaflet. 8: 10. 1953.
- T. meiandra* (Hillebr.) Harms var. *degeneri* Sherff, Bot. Leaflet. 6: 27. 1952.
- T. meiandra* (Hillebr.) Harms var. *hillebrandii* Sherff, Bot. Leaflet. 6: 31. 1952.
- T. meiandra* (Hillebr.) Harms var. *hiloensis* Sherff, Bot. Leaflet. 6: 34. 1952.
- T. meiandra* (Hillebr.) Harms var.



- leptomera* Sherff, Bot. Leaflet. 6:30. 1952.
- T. meiandra* (Hillebr.) Harms var. *longipedunculata* Skottsb., Acta Horti Göteborg. 15:412. 1944.
- T. meiandra* (Hillebr.) Harms var. *makalehana* Sherff, Bot. Leaflet. 6:36. 1952.
- T. meiandra* (Hillebr.) Harms var. *mauiensis* Sherff, Bot. Leaflet. 6:29. 1952.
- T. meiandra* (Hillebr.) Harms var. *molokaiensis* Skottsb., Acta Horti Göteborg. 15:412. 1944.
- T. meiandra* (Hillebr.) Harms var. *occidentalis* Skottsb., Acta Horti Göteborg. 15:413. 1944.
- T. meiandra* (Hillebr.) Harms var. *olowaluana* Sherff, Bot. Leaflet. 6:37. 1952.
- T. meiandra* (Hillebr.) Harms var. *ovalis* Sherff, Bot. Leaflet. 6:31. 1952.
- T. meiandra* (Hillebr.) Harms var. *polyantha* Sherff, Bot. Leaflet. 6:28. 1952.
- T. meiandra* (Hillebr.) Harms var. *polystigmata* Sherff, Bot. Leaflet. 7:9. 1952.
- T. meiandra* (Hillebr.) Harms var. *prolifera* Sherff, Bot. Leaflet. 6:32. 1952.
- T. meiandra* (Hillebr.) Harms var. *prolificoides* Sherff, Bot. Leaflet. 6:33. 1952.
- T. meiandra* (Hillebr.) Harms var. *ramosior* Sherff, Bot. Leaflet. 6:36. 1952.
- T. meiandra* (Hillebr.) Harms var. *rhynchocarpa* Sherff, Bot. Leaflet. 6:33. 1952.
- T. meiandra* (Hillebr.) Harms var. *rhynchocarpoides* O. Degener & Sherff, in Sherff, Bot. Leaflet. 7:8. 1952.
- T. meiandra* (Hillebr.) Harms var. *rockii* Sherff, Bot. Leaflet. 6:33. 1952.
- T. meiandra* (Hillebr.) Harms var. *simulans* Sherff, Bot. Leaflet. 6:35. 1952.
- T. meiandra* (Hillebr.) Harms var. *skottsbergii* Sherff, Bot. Leaflet. 6:35. 1952, nom. illeg.
- T. meiandra* (Hillebr.) Harms var. *tenuistylis* Sherff, Bot. Leaflet. 6:35. 1952.
- T. meiandra* (Hillebr.) Harms var. *tenuistylodes* O. Degener & Sherff, in Sherff, Bot. Leaflet. 8:10. 1953.
- T. munroi* Sherff, Bot. Leaflet. 7:7. 1952.
- T. oahuensis* (A. Gray) Harms var. *eradiata* Sherff, Bot. Leaflet. 8:5. 1953.
- T. oahuensis* (A. Gray) Harms var. *fauriei* Sherff, Bot. Leaflet. 8:3. 1953.
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NOTE: As defined by Philipson (1970), *Tetraplasandra* is endemic to Hawaii; those species described from Malesia were referred to *Gastonia*. The numerous taxa recognized by Sherff (1955) were based primarily on variations in the number of stamens and carpels and in leaflet size and shape. These same characters are now known to vary widely within individual populations and, therefore, are not

suitable for the recognition of such taxa. Also, the sections of *Tetraplasandra* recognized by Sherff were based in large part on stamen number and consequently do not appear to represent natural, monophyletic groupings.

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